

**COMPLETE LISTING OF ALL CLAIMS, WITH MARKINGS AND STATUS IDENTIFIERS**  
(Currently amended claims showing deletions by ~~striketrough~~ and additions by underlining)

1 (currently amended): A human PTH or human PTHrP analogue or a truncated human PTH or human PTHrP analogue or a pharmaceutically acceptable salt thereof that selectively binds to the PTH2 receptor.

2 (currently amended): A human PTH or human PTHrP analogue or a truncated human PTH or human PTHrP analogue or a pharmaceutically acceptable salt thereof according to claim 1 where said analogue is a selective PTH2 receptor agonist.

3 (currently amended): A human PTH or human PTHrP analogue or a truncated human PTH or human PTHrP analogue or a pharmaceutically acceptable salt thereof according to claim 1 where said analogue is a selective PTH2 receptor antagonist.

4 (withdrawn): A method of selectively binding a PTH2 receptor which comprises administering to a patient in need thereof an effective amount of an analogue according to claim 1 or a pharmaceutically-acceptable salt thereof.

5 (withdrawn): A method of selectively eliciting an agonist response from the PTH2 receptor which comprises administering to a patient in need thereof an effective amount of an analogue according to claim 2 or a pharmaceutically acceptable salt thereof.

6 (withdrawn): A method of selectively eliciting an antagonist response from the PTH2 receptor which comprises administering to a patient in need thereof an effective amount of an analogue according to claim 3 or a pharmaceutically acceptable salt thereof.

7 (previously presented): An analogue according to claim 1 wherein said analogue is of formula (I),  
(R<sup>1</sup>R<sup>2</sup>)-A<sup>1</sup>-A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>-A<sup>7</sup>-A<sup>8</sup>-A<sup>9</sup>-A<sup>10</sup>-A<sup>11</sup>-A<sup>12</sup>-A<sup>13</sup>-A<sup>14</sup>-A<sup>15</sup>-A<sup>16</sup>-A<sup>17</sup>-A<sup>18</sup>-A<sup>19</sup>-A<sup>20</sup>-  
A<sup>21</sup>-A<sup>22</sup>-A<sup>23</sup>-A<sup>24</sup>-A<sup>25</sup>-A<sup>26</sup>-A<sup>27</sup>-A<sup>28</sup>-A<sup>29</sup>-A<sup>30</sup>-A<sup>31</sup>-A<sup>32</sup>-A<sup>33</sup>-A<sup>34</sup>-A<sup>35</sup>-A<sup>36</sup>-A<sup>37</sup>-A<sup>38</sup>-R<sup>3</sup>,

(I)

or a pharmaceutically-acceptable salt thereof wherein

A<sup>1</sup> is a hydrophilic or a lipophilic amino acid;

A<sup>2</sup> is a lipophilic amino acid;

A<sup>3</sup> is a hydrophilic or a lipophilic amino acid;

A<sup>4</sup> is a hydrophilic amino acid;

A<sup>5</sup> is a hydrophilic or a lipophilic amino acid;

A<sup>6</sup> is a hydrophilic amino acid or is deleted;

A<sup>7</sup> is a hydrophilic or a lipophilic amino acid or is deleted;

A<sup>8</sup> is a lipophilic amino acid or is deleted;

A<sup>9</sup> is a hydrophilic amino acid or is deleted;

A<sup>10</sup> is a hydrophilic amino acid or is deleted;

A<sup>11</sup> is a hydrophilic or a lipophilic amino acid or is deleted;

A<sup>12</sup> is a hydrophilic or a lipophilic amino acid or is deleted;

A<sup>13</sup> is a hydrophilic amino acid;

A<sup>14</sup> is a hydrophilic amino acid or is deleted;

A<sup>15</sup> is a lipophilic amino acid or is deleted;

A<sup>16</sup> is a hydrophilic or a lipophilic amino acid or is deleted;

A<sup>17</sup> is a hydrophilic or a lipophilic amino acid or is deleted;

A<sup>18</sup> is a lipophilic amino acid or is deleted;

A<sup>19</sup> is a hydrophilic or a lipophilic amino acid or is deleted;

A<sup>20</sup> is a hydrophilic amino acid or is deleted;

A<sup>21</sup> is a hydrophilic or a lipophilic amino acid or is deleted;

A<sup>22</sup> is a lipophilic or a hydrophilic amino acid or is deleted;

A<sup>23</sup> is a hydrophilic or a lipophilic amino acid;

A<sup>24</sup> is a hydrophilic or a lipophilic amino acid;

A<sup>25</sup> is a hydrophilic amino acid;

A<sup>26</sup> is a hydrophilic amino acid;

A<sup>27</sup> is a lipophilic or a hydrophilic amino acid;

A<sup>28</sup> is a lipophilic amino acid;

A<sup>29</sup> is a lipophilic or a hydrophilic amino acid;

A<sup>30</sup> is a hydrophilic or a lipophilic amino acid;

A<sup>31</sup> is a lipophilic or a hydrophilic amino acid or is deleted;

A<sup>32</sup> is a hydrophilic amino acid or is deleted;

A<sup>33</sup> is a hydrophilic amino acid or is deleted;

A<sup>34</sup> is a lipophilic amino acid or is deleted;

A<sup>35</sup> is a lipophilic amino acid or is deleted;

A<sup>36</sup> is a lipophilic or a hydrophilic amino acid or is deleted;

A<sup>37</sup> is a lipophilic amino acid or is deleted;

A<sup>38</sup> is a lipophilic or a hydrophilic amino acid or is deleted;

R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>2</sub>-C<sub>30</sub>)alkenyl, phenyl-(C<sub>1</sub>-C<sub>30</sub>)alkyl, naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>2</sub>-C<sub>30</sub>)alkenyl, hydroxy-phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl or hydroxy-naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl; or one of R<sup>1</sup> or R<sup>2</sup> is COE<sup>1</sup> where E<sup>1</sup> is (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>2</sub>-C<sub>30</sub>)alkenyl, phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>2</sub>-C<sub>30</sub>)alkenyl, hydroxy-phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl or hydroxy-naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl; and

R<sup>3</sup> is OH, NH<sub>2</sub>, (C<sub>1</sub>-C<sub>30</sub>)alkoxy or NH-Y-CH<sub>2</sub>-Z, where Y is a (C<sub>1</sub>-C<sub>30</sub>) hydrocarbon moiety and Z is CO<sub>2</sub>H or CONH<sub>2</sub>;

provided that the compound is not PTH(1-34)R<sup>3</sup> (SEQ ID NO:4), PTH(1-35)R<sup>3</sup> (SEQ ID NO:5), PTH(1-36)R<sup>3</sup> (SEQ ID NO:6), PTH(1-37)R<sup>3</sup> (SEQ ID NO:7), or PTH(1-38)R<sup>3</sup> (SEQ ID NO:8).

8 (withdrawn): A method of selectively binding a PTH2 receptor which comprises administering to a patient in need thereof an effective amount of an analogue according to claim 7 or a pharmaceutically-acceptable salt thereof.

9 (previously presented): An analogue according to claim 1 of formula (II),

(R<sup>1</sup>R<sup>2</sup>)-A<sup>1</sup>-A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>-A<sup>7</sup>-A<sup>8</sup>-A<sup>9</sup>-A<sup>10</sup>-A<sup>11</sup>-A<sup>12</sup>-A<sup>13</sup>-A<sup>14</sup>-A<sup>15</sup>-A<sup>16</sup>-A<sup>17</sup>-A<sup>18</sup>-A<sup>19</sup>-A<sup>20</sup>-A<sup>21</sup>-A<sup>22</sup>-A<sup>23</sup>-A<sup>24</sup>-A<sup>25</sup>-A<sup>26</sup>-A<sup>27</sup>-A<sup>28</sup>-A<sup>29</sup>-A<sup>30</sup>-A<sup>31</sup>-A<sup>32</sup>-A<sup>33</sup>-A<sup>34</sup>-A<sup>35</sup>-A<sup>36</sup>-A<sup>37</sup>-A<sup>38</sup>-R<sup>3</sup>,

(II)

or a pharmaceutically-acceptable salt thereof wherein

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A<sup>1</sup> is Ser, Ala, Dap, Thr, Aib or is deleted;

A<sup>2</sup> is Val, Leu, Ile, Phe, Nle,  $\beta$ -Nal, Aib, p-X-Phe, Acc, Cha, Met or is deleted;

A<sup>3</sup> is Ser, Thr, Aib or is deleted;

A<sup>4</sup> is Glu, Asp or is deleted;

A<sup>5</sup> is Leu, Val, Nle, Ile, Cha,  $\beta$ -Nal, Trp, Pal, Acc, Phe, p-X-Phe or is deleted;

A<sup>6</sup> is Gln, a hydrophilic amino acid or is deleted;

A<sup>7</sup> is Leu, Val, Nle, Ile, Cha,  $\beta$ -Nal, Trp, Pal, Acc, Phe, p-X-Phe, a lipophilic amino acid, or is deleted;

A<sup>8</sup> is Met, Nva, Leu, Val, Ile, Cha, Acc, Nle, p-X-Phe, Phe,  $\beta$ -Nal, Bpa, a lipophilic amino acid or is deleted;

A<sup>9</sup> is His, a hydrophilic amino acid or is deleted;

A<sup>10</sup> is Asn, a hydrophilic amino acid or is deleted;

A<sup>11</sup> is Leu, Val, Nle, Ile, Cha,  $\beta$ -Nal, Trp, Pal, Acc, Phe, p-X-Phe, a hydrophilic amino acid or is deleted;

A<sup>12</sup> is Gly, Acc, Aib, or is deleted;

A<sup>13</sup> is Lys, Arg or  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$ ;

A<sup>14</sup> is His or is deleted;

A<sup>15</sup> is Leu, Val, Nle, Ile, Cha,  $\beta$ -Nal, Trp, Pal, Acc, Phe, p-X-Phe or is deleted;

A<sup>16</sup> is Ser, Asn, Ala, Aib or is deleted;

A<sup>17</sup> is Ser, Thr, Aib or is deleted;

A<sup>18</sup> is Met, Nva, Leu, Val, Ile, Nle, p-X-Phe, Phe,  $\beta$ -Nal, Acc, Cha, Aib or is deleted;

A<sup>19</sup> is Glu, Aib or is deleted;

A<sup>20</sup> is Arg, Lys,  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$  or is deleted;

A<sup>21</sup> is Val, Leu, Ile, Phe, Nle,  $\beta$ -Nal, Aib, p-X-Phe, Acc, Cha, Met or is deleted;

A<sup>22</sup> is Acc, Aib, Glu or is deleted;

A<sup>23</sup> is Trp, Acc, Phe, p-X-Phe, Aib,  $\beta$ -Nal or Cha;

A<sup>24</sup> is Leu, Acc, Ile, Val, Phe,  $\beta$ -Nal, Nle, Aib, p-X-Phe or Cha;

A<sup>25</sup> is Arg, Lys or  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$ ;

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A<sup>26</sup> is Arg, Lys or  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)-\text{C(O)}$ ;

A<sup>27</sup> is Lys, Aib, Leu, hArg, Gln, Acc, Arg, Cha, Nle, Ile, Val, Phe,  $\beta$ -Nal, or p-X-Phe, where the Lys is optionally substituted on the  $\epsilon$ -amino group by an acyl group;

A<sup>28</sup> is Leu, Acc, Cha, Ile, Val, Phe, Nle,  $\beta$ -Nal, Aib or p-X-Phe;

A<sup>29</sup> is Gln, Acc or Aib;

A<sup>30</sup> is Asp, Lys, Arg or is deleted;

A<sup>31</sup> is Val, Leu, Nle, Acc, Cha, Phe, Ile,  $\beta$ -Nal Aib, p-X-Phe or is deleted;

A<sup>32</sup> is His or is deleted;

A<sup>33</sup> is Asn or is deleted;

A<sup>34</sup> is Phe, Tyr, Amp, Aib,  $\beta$ -Nal, Cha, Nle, Leu, Ile, Acc, p-X-Phe or is deleted;

A<sup>35</sup> is Val, Leu, Nle, Acc, Cha, Phe, Ile,  $\beta$ -Nal Aib, p-X-Phe or is deleted;

A<sup>36</sup> is Ala, Val, Aib, Acc, Nva, Abu or is deleted;

A<sup>37</sup> is Leu, Val, Nle, Ile, Cha,  $\beta$ -Nal, Trp, Pal, Acc, Phe, p-X-Phe, a lipophilic amino acid, or is deleted;

A<sup>38</sup> is Gly, Acc, Aib, or is deleted;

where X for each occurrence is independently selected from the group consisting of OH, a halo and CH<sub>3</sub>;

R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>2</sub>-C<sub>30</sub>)alkenyl, phenyl-(C<sub>1</sub>-C<sub>30</sub>)alkyl, naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>2</sub>-C<sub>30</sub>)alkenyl, hydroxy-phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl or hydroxy-naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl;

or one of R<sup>1</sup> or R<sup>2</sup> is COE<sup>1</sup> where E<sup>1</sup> is (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>2</sub>-C<sub>30</sub>)alkenyl, phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>2</sub>-C<sub>30</sub>)alkenyl, hydroxy-phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl or hydroxy-naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl; and

R<sup>3</sup> is OH, NH<sub>2</sub>, (C<sub>1</sub>-C<sub>30</sub>)alkoxy or NH-Y-CH<sub>2</sub>-Z, where Y is a (C<sub>1</sub>-C<sub>30</sub>) hydrocarbon moiety and Z is CO<sub>2</sub>H or CONH<sub>2</sub>;

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n for each occurrence is independently an integer from 1 to 5; and

R<sup>4</sup> for each occurrence is independently (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>1</sub>-C<sub>30</sub>)acyl or -C((NH)(NH<sub>2</sub>));

provided that the compound is not PTH(1-34)R<sup>3</sup> (SEQ ID NO:4), PTH(1-35)R<sup>3</sup> (SEQ ID NO:5), PTH(1-36)R<sup>3</sup> (SEQ ID NO:6), PTH(1-37)R<sup>3</sup> (SEQ ID NO:7), or PTH(1-38)R<sup>3</sup> (SEQ ID NO:8).

10 (original): A compound of the formula (III),  
(R<sup>1</sup>R<sup>2</sup>)-A<sup>1</sup>-A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>-A<sup>7</sup>-A<sup>8</sup>-A<sup>9</sup>-A<sup>10</sup>-A<sup>11</sup>-A<sup>12</sup>-A<sup>13</sup>-A<sup>14</sup>-A<sup>15</sup>-A<sup>16</sup>-A<sup>17</sup>-A<sup>18</sup>-A<sup>19</sup>-A<sup>20</sup>-  
A<sup>21</sup>-A<sup>22</sup>-A<sup>23</sup>-A<sup>24</sup>-A<sup>25</sup>-A<sup>26</sup>-A<sup>27</sup>-A<sup>28</sup>-A<sup>29</sup>-A<sup>30</sup>-A<sup>31</sup>-A<sup>32</sup>-A<sup>33</sup>-A<sup>34</sup>-A<sup>35</sup>-A<sup>36</sup>-A<sup>37</sup>-A<sup>38</sup>-R<sup>3</sup>,

(III)

or a pharmaceutically-acceptable salt thereof wherein

A<sup>1</sup> is Ser, Ala, Dap, Thr, Aib or is deleted;

A<sup>2</sup> is Val, Leu, Ile, Phe, Nle, β-Nal, Aib, p-X-Phe, Acc, Cha, Met or is deleted;

A<sup>3</sup> is Ser, Thr, Aib or is deleted;

A<sup>4</sup> is Glu, Asp or is deleted;

A<sup>5</sup> is Leu, Val, Nle, Ile, Cha, β-Nal, Trp, Pal, Acc, Phe, p-X-Phe or is deleted;

A<sup>6</sup> is Gln, a hydrophilic amino acid or is deleted;

A<sup>7</sup> is Leu, Val, Nle, Ile, Cha, β-Nal, Trp, Pal, Acc, Phe, p-X-Phe, a lipophilic amino acid, or is deleted;

A<sup>8</sup> is Met, Nva, Leu, Val, Ile, Cha, Acc, Nle, p-X-Phe, Phe, β-Nal, Bpa, a lipophilic amino acid or is deleted;

A<sup>9</sup> is His, a hydrophilic amino acid or is deleted;

A<sup>10</sup> is Asn, a hydrophilic amino acid or is deleted;

A<sup>11</sup> is Leu, Val, Nle, Ile, Cha, β-Nal, Trp, Pal, Acc, Phe, p-X-Phe, a hydrophilic amino acid or is deleted;

A<sup>12</sup> is Gly, Acc, Aib, or is deleted;

A<sup>13</sup> is Lys, Arg or HN-CH((CH<sub>2</sub>)<sub>n</sub>NH-R<sup>4</sup>)-C(O);

A<sup>14</sup> is His or is deleted;

A<sup>15</sup> is Leu, Val, Nle, Ile, Cha, β-Nal, Trp, Pal, Acc, Phe, p-X-Phe or is deleted;

A<sup>16</sup> is Ser, Asn, Ala, Aib or is deleted;

A<sup>17</sup> is Ser, Thr, Aib or is deleted;

A<sup>18</sup> is Met, Nva, Leu, Val, Ile, Nle, p-X-Phe, Phe, β-Nal, Acc, Cha, Aib or is deleted;

A<sup>19</sup> is Glu, Aib or is deleted;

A<sup>20</sup> is Arg, Lys, HN-CH((CH<sub>2</sub>)<sub>n</sub>NH-R<sup>4</sup>)-C(O) or is deleted;

A<sup>21</sup> is Val, Leu, Ile, Phe, Nle, β-Nal, Aib, p-X-Phe, Acc, Cha, Met or is deleted;

A<sup>22</sup> is Acc, Aib, Glu or is deleted;

A<sup>23</sup> is Trp, Acc, Phe, p-X-Phe, Aib, β-Nal or Cha;

A<sup>24</sup> is Leu, Acc, Ile, Val, Phe, β-Nal, Nle, Aib, p-X-Phe or Cha;

A<sup>25</sup> is Arg, Lys or HN-CH((CH<sub>2</sub>)<sub>n</sub>NH-R<sup>4</sup>)-C(O);

A<sup>26</sup> is Arg, Lys or HN-CH((CH<sub>2</sub>)<sub>n</sub>NH-R<sup>4</sup>)-C(O);

A<sup>27</sup> is Lys, Aib, Leu, hArg, Gln, Acc, Arg, Cha, Nle, Ile, Val, Phe, β-Nal, or p-X-Phe, where the Lys is optionally substituted on the ε-amino group by an acyl group;

A<sup>28</sup> is Leu, Acc, Cha, Ile, Val, Phe, Nle, β-Nal, Aib or p-X-Phe;

A<sup>29</sup> is Gln, Acc or Aib;

A<sup>30</sup> is Asp, Lys, Arg or is deleted;

A<sup>31</sup> is Val, Leu, Nle, Acc, Cha, Phe, Ile, β-Nal Aib, p-X-Phe or is deleted;

A<sup>32</sup> is His or is deleted;

A<sup>33</sup> is Asn or is deleted;

A<sup>34</sup> is Phe, Tyr, Amp, Aib, β-Nal, Cha, Nle, Leu, Ile, Acc, p-X-Phe or is deleted;

A<sup>35</sup> is Val, Leu, Nle, Acc, Cha, Phe, Ile, β-Nal, Aib, p-X-Phe or is deleted;

A<sup>36</sup> is Ala, Val, Aib, Acc, Nva, Abu or is deleted;

A<sup>37</sup> is Leu, Val, Nle, Ile, Cha, β-Nal, Trp, Pal, Acc, Phe, p-X-Phe, a lipophilic amino acid, or is deleted;

A<sup>38</sup> is Gly, Acc, Aib, or is deleted;

where X for each occurrence is independently selected from the group consisting of OH, a halo and CH<sub>3</sub>;

$R^1$  and  $R^2$  are each independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>2</sub>-C<sub>30</sub>)alkenyl, phenyl-(C<sub>1</sub>-C<sub>30</sub>)alkyl, naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>2</sub>-C<sub>30</sub>)alkenyl, hydroxy-phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl or hydroxy-naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl;

or one of  $R^1$  or  $R^2$  is COE<sup>1</sup> where E<sup>1</sup> is (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>2</sub>-C<sub>30</sub>)alkenyl, phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>2</sub>-C<sub>30</sub>)alkenyl, hydroxy-phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl or hydroxy-naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl; and

$R^3$  is OH, NH<sub>2</sub>, (C<sub>1</sub>-C<sub>30</sub>)alkoxy or NH-Y-CH<sub>2</sub>-Z, where Y is a (C<sub>1</sub>-C<sub>30</sub>) hydrocarbon moiety and Z is CO<sub>2</sub>H or CONH<sub>2</sub>;

n for each occurrence is independently an integer from 1 to 5; and

$R^4$  for each occurrence is independently (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>1</sub>-C<sub>30</sub>)acyl or -C((NH)(NH<sub>2</sub>));

provided that when A<sup>8</sup> is not a lipophilic D-amino acid or is not deleted then at least one of A<sup>6</sup>, A<sup>7</sup>, A<sup>9</sup>, A<sup>10</sup>, A<sup>11</sup> and A<sup>12</sup> is a D-amino acid or at least one of A<sup>6</sup>, A<sup>7</sup>, A<sup>9</sup>, A<sup>10</sup>, A<sup>11</sup>, A<sup>12</sup>, A<sup>13</sup>, A<sup>14</sup>, A<sup>15</sup>, A<sup>16</sup>, A<sup>17</sup>, A<sup>18</sup>, A<sup>19</sup>, A<sup>20</sup>, A<sup>21</sup> and A<sup>22</sup> is deleted;

and further provided that when the compound contains a D-amino acid then A<sup>36</sup> is deleted.

11 (previously presented): A compound according to claim 10 wherein said compound is

[D-Nle<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,

[D-Nle<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,

[D-Leu<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,

[D-Cha<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,

[D-Phe<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,

[D-Nal<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,

[D-Abu<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,

[D-Met<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,

[Cha<sup>7, 11</sup>, D-Met<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,



[D-Ile<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,  
[Cha<sup>7, 11</sup>, D-Ile<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Ile<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Leu<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,  
[Cha<sup>7,11</sup>, D-Leu<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Val<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,  
[Cha<sup>7, 11</sup>, D-Val<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Val<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Cha<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,  
[Cha<sup>7,11</sup>, D-Cha<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Ala<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,  
[Cha<sup>7, 11</sup>, D-Ala<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Ala<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Phe<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,  
[Cha<sup>7,11</sup>, D-Phe<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Nal<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Trp<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,  
[Cha<sup>7,11</sup>, D-Trp<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Trp<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Abu<sup>8</sup>]hPTH(1-34)NH<sub>2</sub>,  
[Cha<sup>7,11</sup>, D-Abu<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[D-Nle<sup>8</sup>, Nle<sup>18</sup>]hPTH(1-34)NH<sub>2</sub>,  
[des-Met<sup>8</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:18),  
[Cha<sup>7,11</sup>, des-Met<sup>8</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:19),  
[Cha<sup>7,11</sup>, des-Met<sup>8</sup>, des-Met<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:20),  
[des-Met<sup>8</sup>, des-Met<sup>18</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:21),  
[Cha<sup>7,11</sup>, des-Met<sup>8</sup>, des-Met<sup>18</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:22),  
[des-Met<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:23),  
[des-Met<sup>18</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:24),  
[Cha<sup>7,11</sup>, des-Met<sup>18</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:25),  
[Cha<sup>7,11</sup>, des-Met<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:26),  
[D-Nle<sup>8</sup>, des-Met<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
[des-Gln<sup>6</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:27),

[des-Leu<sup>7</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:28),  
 [des-His<sup>9</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:29),  
 [des-Asn<sup>10</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:30),  
 [des-Leu<sup>11</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:31),  
 [des-Gly<sup>12</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:32),  
 [des-Lys<sup>13</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:33),  
 [des-His<sup>14</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:34),  
 [des-Leu<sup>15</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:35),  
 [des-Asn<sup>16</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:36),  
 [des-Ser<sup>17</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:37),  
 [des-Glu<sup>19</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:38),  
 [des-Arg<sup>20</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:39),  
 [des-Val<sup>21</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:40),  
 [des-Glu<sup>22</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:41),  
 [des-Gln<sup>6</sup>, Cha<sup>7,11</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:42),  
 [des-Leu<sup>7</sup>, Nle<sup>8,18</sup>, Cha<sup>11</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:43),  
 [Cha<sup>7,11</sup>, des-His<sup>9</sup>, Nle<sup>8,18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:44),  
 [des-Gln<sup>6</sup>, Cha<sup>7,11</sup>, D-Nle<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
 [des-Leu<sup>7</sup>, D-Nle<sup>8</sup>, Cha<sup>11</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
 [Cha<sup>7,11</sup>, D-Nle<sup>8</sup>, des-His<sup>9</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
 [Cha<sup>7,11</sup>, D-Nle<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-31)NH<sub>2</sub>,  
 [Cha<sup>7,11</sup>, des-Met<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:16),  
 [Cha<sup>7,11</sup>, D-Nle<sup>8</sup>, des-Met<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
 [Cha<sup>7,11</sup>, des-Met<sup>8</sup>, des-His<sup>9</sup>, des-Asn<sup>10</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:45),  
 [Cha<sup>7,11</sup>, des-Ser<sup>17</sup>, des-Met<sup>18</sup>, des-Glu<sup>19</sup>]hPTH(1-34)NH<sub>2</sub> (SEQ ID NO:46),  
 [D-Met<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
 [D-Met<sup>8</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
 [D-Bpa<sup>8</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>,  
 [D-Nle<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(7-34)NH<sub>2</sub>,  
 [D-Nle<sup>8</sup>, Nle<sup>18</sup>]hPTH(7-34)NH<sub>2</sub> or  
 [D-Met<sup>8</sup>]hPTH(7-34)NH<sub>2</sub>.

12 (previously presented): A compound according to claim 11 wherein said compound is

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[Cha<sup>7,11</sup>, des-Met<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH-(1-34)NH<sub>2</sub> (SEQ ID NO:16),  
[Cha<sup>7,11</sup>, D-Nle<sup>8</sup>, des-Met<sup>18</sup>, Tyr<sup>34</sup>]hPTH-(1-34)NH<sub>2</sub>,  
[Cha<sup>7,11</sup>, D-Nle<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH-(1-34)NH<sub>2</sub>,  
[D-Nle<sup>8</sup>, Nle<sup>18</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub> or [D-Bpa<sup>8</sup>, Tyr<sup>34</sup>]hPTH(1-34)NH<sub>2</sub>.

13 (currently amended): A human PTHrP analogue of formula (IV) that selectively binds to the PTH2 receptor,  
(R<sup>1</sup>R<sup>2</sup>)-A<sup>1</sup>-A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>-A<sup>7</sup>-A<sup>8</sup>-A<sup>9</sup>-A<sup>10</sup>-A<sup>11</sup>-A<sup>12</sup>-A<sup>13</sup>-A<sup>14</sup>-A<sup>15</sup>-A<sup>16</sup>-A<sup>17</sup>-A<sup>18</sup>-A<sup>19</sup>-A<sup>20</sup>-  
A<sup>21</sup>-A<sup>22</sup>-A<sup>23</sup>-A<sup>24</sup>-A<sup>25</sup>-A<sup>26</sup>-A<sup>27</sup>-A<sup>28</sup>-A<sup>29</sup>-A<sup>30</sup>-A<sup>31</sup>-A<sup>32</sup>-A<sup>33</sup>-A<sup>34</sup>-A<sup>35</sup>-A<sup>36</sup>-A<sup>37</sup>-A<sup>38</sup>-R<sup>3</sup>,  
(IV)

or a pharmaceutically acceptable salt thereof, wherein

A<sup>1</sup> is Ala, Ser, Dap, Thr, Aib or is deleted;

A<sup>2</sup> is Val or is deleted;

A<sup>3</sup> is Ser, Aib, Thr or is deleted;

A<sup>4</sup> is Glu, Asp or is deleted;

A<sup>5</sup> is His, Ile, Acc, Val, Nle, Phe, Leu, p-X-Phe, β-Nal, Aib, Cha or is deleted;

A<sup>6</sup> is Gln, a hydrophilic amino acid or is deleted;

A<sup>7</sup> is Leu, Val, Cha, Nle, β-Nal, Trp, Pal, Acc, Phe, p-X-Phe, Aib, a lipophilic amino acid or is deleted;

A<sup>8</sup> is Leu, Met, Acc, Cha, Aib, Nle, Phe, Ile, Val, β-Nal, p-X-Phe, a lipophilic amino acid or is deleted;

A<sup>9</sup> is His, a hydrophilic amino acid or is deleted;

A<sup>10</sup> is Asp, Asn, a hydrophilic amino acid or is deleted;

A<sup>11</sup> is Lys, Arg, Leu, Cha, Aib, p-X-Phe, Ile, Val, Nle, Acc, Phe, β-Nal, HN-CH((CH<sub>2</sub>)<sub>n</sub>NH-R<sup>4</sup>)-C(O), a lipophilic D-amino acid, a hydrophilic amino acid or is deleted;

A<sup>12</sup> is Gly, Acc, Aib or is deleted;

A<sup>13</sup> is Lys, Arg, HN-CH((CH<sub>2</sub>)<sub>n</sub>NH-R<sup>4</sup>)-C(O) or is deleted;

A<sup>14</sup> is Ser, His or is deleted;

A<sup>15</sup> is Ile, Acc, Cha, Leu, Phe, Nle, β-Nal, Trp, p-X-Phe, Val, Aib or is deleted;

A<sup>16</sup> is Gln, Aib or is deleted;

A<sup>17</sup> is Asp, Aib or is deleted;

A<sup>18</sup> is Leu, Aib, Acc, Cha, Phe, Ile, Nle,  $\beta$ -Nal, Val, p-X-Phe or is deleted;

A<sup>19</sup> is Arg, Lys, Aib,  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$  or is deleted;

A<sup>20</sup> is Arg, Lys,  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$  or is deleted;

A<sup>21</sup> is Arg, Lys,  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$  or is deleted;

A<sup>22</sup> is Phe, Glu, Aib, Acc, p-X-Phe,  $\beta$ -Nal, Val, Leu, Ile, Nle or Cha;

A<sup>23</sup> is Phe, Leu, Lys, Acc, Cha,  $\beta$ -Nal, Aib, Nle, Ile, p-X-Phe, Val or Trp;

A<sup>24</sup> is Leu, Lys, Acc, Nle, Ile, Val, Phe,  $\beta$ -Nal, Aib, p-X-Phe, Arg or Cha;

A<sup>25</sup> is His, Lys, Aib, Acc, Arg or Glu;

A<sup>26</sup> is His, Aib, Acc, Arg or Lys;

A<sup>27</sup> is Leu, Lys, Acc, Arg, Ile, Val, Phe, Aib, Nle,  $\beta$ -Nal, p-X-Phe or Cha;

A<sup>28</sup> is Ile, Leu, Lys, Acc, Cha, Val, Phe, p-X-Phe, Nle,  $\beta$ -Nal, Aib or is deleted;

A<sup>29</sup> is Ala, Glu, Acc, Aib or is deleted;

A<sup>30</sup> is Glu, Leu, Nle, Cha, Aib, Acc, Lys, Arg or is deleted;

A<sup>31</sup> is Ile, Leu, Cha, Lys, Acc, Phe, Val, Nle,  $\beta$ -Nal, Arg or is deleted;

A<sup>32</sup> is His or is deleted;

A<sup>33</sup> is Thr, Ser or is deleted;

A<sup>34</sup> is Ala, Phe, Tyr, Cha, Val, Ile, Leu, Nle,  $\beta$ -Nal, Aib, Acc or is deleted;

A<sup>35</sup> is Glu, Asp or is deleted;

A<sup>36</sup> is Ile, Acc, Cha, Leu, Phe, Nle,  $\beta$ -Nal, Trp, p-X-Phe, Val, Aib or is deleted;

A<sup>37</sup> is Arg, Lys,  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$  or is deleted;

A<sup>38</sup> is Ala, Phe, Tyr, Cha, Val, Ile, Leu, Nle,  $\beta$ -Nal, Aib, Acc or is deleted;

R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>2</sub>-C<sub>30</sub>)alkenyl,

phenyl-(C<sub>1</sub>-C<sub>30</sub>)alkyl, naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl,  
 hydroxy(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>2</sub>-C<sub>30</sub>)alkenyl, hydroxy-  
 phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl or hydroxy-naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl;  
 or one of R<sup>1</sup> or R<sup>2</sup> is COE<sup>1</sup> where E<sup>1</sup> is (C<sub>1</sub>-C<sub>30</sub>)alkyl,  
 (C<sub>2</sub>-C<sub>30</sub>)alkenyl, phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, naphthyl(C<sub>1</sub>-  
 C<sub>30</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>2</sub>-  
 C<sub>30</sub>)alkenyl, hydroxy-phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl or hydroxy-  
 naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl; and  
 R<sup>3</sup> is OH, NH<sub>2</sub>, (C<sub>1</sub>-C<sub>30</sub>)alkoxy or NH-Y-CH<sub>2</sub>-Z, where Y is  
 a (C<sub>1</sub>-C<sub>30</sub>) hydrocarbon moiety and Z is CO<sub>2</sub>H or CONH<sub>2</sub>;  
 n for each occurrence is independently an integer  
 from 1 to 5; and  
 R<sup>4</sup> for each occurrence is independently (C<sub>1</sub>-C<sub>30</sub>)alkyl,  
 (C<sub>1</sub>-C<sub>30</sub>)acyl or -C((NH)(NH<sub>2</sub>));

provided that the compound is not PTHrP(1-34)R<sup>3</sup> (SEQ ID NO:9),  
 PTHrP(1-35)R<sup>3</sup> (SEQ ID NO:10), PTHrP(1-36)R<sup>3</sup> (SEQ ID NO:11),  
 PTHrP(1-37)R<sup>3</sup> (SEQ ID NO:12) or PTHrP(1-38)R<sup>3</sup> (SEQ ID NO:13),  
 and further provided that the compound is not [Ile<sup>5</sup>,  
 Trp<sup>23</sup>]PTHrP(1-36) (SEQ ID NO:14) or [Trp<sup>23</sup>]PTHrP(1-36) (SEQ ID  
 NO:15).

14 (original): A compound of formula (V),  
 (R<sup>1</sup>R<sup>2</sup>)-A<sup>1</sup>-A<sup>2</sup>-A<sup>3</sup>-A<sup>4</sup>-A<sup>5</sup>-A<sup>6</sup>-A<sup>7</sup>-A<sup>8</sup>-A<sup>9</sup>-A<sup>10</sup>-A<sup>11</sup>-A<sup>12</sup>-A<sup>13</sup>-A<sup>14</sup>-A<sup>15</sup>-A<sup>16</sup>-A<sup>17</sup>-A<sup>18</sup>-A<sup>19</sup>-  
 A<sup>20</sup>-A<sup>21</sup>-A<sup>22</sup>-A<sup>23</sup>-A<sup>24</sup>-A<sup>25</sup>-A<sup>26</sup>-A<sup>27</sup>-A<sup>28</sup>-A<sup>29</sup>-A<sup>30</sup>-A<sup>31</sup>-A<sup>32</sup>-A<sup>33</sup>-A<sup>34</sup>-A<sup>35</sup>-A<sup>36</sup>-A<sup>37</sup>-A<sup>38</sup>-R<sup>3</sup>,  
 (V)

or a pharmaceutically acceptable salt thereof, wherein

A<sup>1</sup> is Ala, Ser, Dap, Thr, Aib or is deleted;

A<sup>2</sup> is Val or is deleted;

A<sup>3</sup> is Ser, Aib, Thr or is deleted;

A<sup>4</sup> is Glu, Asp or is deleted;

A<sup>5</sup> is His, Ile, Acc, Val, Nle, Phe, Leu, p-X-Phe, β-Nal, Aib, Cha  
 or is deleted;

A<sup>6</sup> is Gln, a hydrophilic amino acid or is deleted;

A<sup>7</sup> is Leu, Val, Cha, Nle,  $\beta$ -Nal, Trp, Pal, Acc, Phe, p-X-Phe, Aib, a lipophilic amino acid or is deleted;

A<sup>8</sup> is Leu, Met, Acc, Cha, Aib, Nle, Phe, Ile, Val,  $\beta$ -Nal, p-X-Phe, a lipophilic amino acid or is deleted;

A<sup>9</sup> is His, a hydrophilic amino acid or is deleted;

A<sup>10</sup> is Asp, Asn, a hydrophilic amino acid or is deleted;

A<sup>11</sup> is Lys, Arg, Leu, Cha, Aib, p-X-Phe, Ile, Val, Nle, Acc, Phe,  $\beta$ -Nal,  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$ , a lipophilic D-amino acid, a hydrophilic amino acid or is deleted;

A<sup>12</sup> is Gly, Acc, Aib or is deleted;

A<sup>13</sup> is Lys, Arg,  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$  or is deleted;

A<sup>14</sup> is Ser, His or is deleted;

A<sup>15</sup> is Ile, Acc, Cha, Leu, Phe, Nle,  $\beta$ -Nal, Trp, p-X-Phe, Val, Aib or is deleted;

A<sup>16</sup> is Gln, Aib or is deleted;

A<sup>17</sup> is Asp, Aib or is deleted;

A<sup>18</sup> is Leu, Aib, Acc, Cha, Phe, Ile, Nle,  $\beta$ -Nal, Val, p-X-Phe or is deleted;

A<sup>19</sup> is Arg, Lys, Aib,  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$  or is deleted;

A<sup>20</sup> is Arg, Lys,  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$  or is deleted;

A<sup>21</sup> is Arg, Lys,  $\text{HN-CH}((\text{CH}_2)_n\text{NH-R}^4)\text{-C(O)}$  or is deleted;

A<sup>22</sup> is Phe, Glu, Aib, Acc, p-X-Phe,  $\beta$ -Nal, Val, Leu, Ile, Nle or Cha;

A<sup>23</sup> is Phe, Leu, Lys, Acc, Cha,  $\beta$ -Nal, Aib, Nle, Ile, p-X-Phe, Val or Trp;

A<sup>24</sup> is Leu, Lys, Acc, Nle, Ile, Val, Phe,  $\beta$ -Nal, Aib, p-X-Phe, Arg or Cha;

A<sup>25</sup> is His, Lys, Aib, Acc, Arg or Glu;

A<sup>26</sup> is His, Aib, Acc, Arg or Lys;

A<sup>27</sup> is Leu, Lys, Acc, Arg, Ile, Val, Phe, Aib, Nle,  $\beta$ -Nal, p-X-Phe or Cha;

A<sup>28</sup> is Ile, Leu, Lys, Acc, Cha, Val, Phe, p-X-Phe, Nle,  $\beta$ -Nal, Aib or is deleted;

A<sup>29</sup> is Ala, Glu, Acc, Aib or is deleted;

A<sup>30</sup> is Glu, Leu, Nle, Cha, Aib, Acc, Lys, Arg or is deleted;

A<sup>31</sup> is Ile, Leu, Cha, Lys, Acc, Phe, Val, Nle,  $\beta$ -Nal, Arg or is deleted;

A<sup>32</sup> is His or is deleted;

A<sup>33</sup> is Thr, Ser or is deleted;

A<sup>34</sup> is Ala, Phe, Tyr, Cha, Val, Ile, Leu, Nle,  $\beta$ -Nal, Aib, Acc or is deleted;

A<sup>35</sup> is Glu, Asp or is deleted;

A<sup>36</sup> is Ile, Acc, Cha, Leu, Phe, Nle,  $\beta$ -Nal, Trp, p-X-Phe, Val, Aib or is deleted;

A<sup>37</sup> is Arg, Lys, HN-CH((CH<sub>2</sub>)<sub>n</sub>NH-R<sup>4</sup>)-C(O) or is deleted;

A<sup>38</sup> is Ala, Phe, Tyr, Cha, Val, Ile, Leu, Nle,  $\beta$ -Nal, Aib, Acc or is deleted;

R<sup>1</sup> and R<sup>2</sup> are each independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>2</sub>-C<sub>30</sub>)alkenyl, phenyl-(C<sub>1</sub>-C<sub>30</sub>)alkyl, naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>2</sub>-C<sub>30</sub>)alkenyl, hydroxy-phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl or hydroxy-naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl; or one of R<sup>1</sup> or R<sup>2</sup> is COE<sup>1</sup> where E<sup>1</sup> is (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>2</sub>-C<sub>30</sub>)alkenyl, phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>1</sub>-C<sub>30</sub>)alkyl, hydroxy(C<sub>2</sub>-C<sub>30</sub>)alkenyl, hydroxy-phenyl(C<sub>1</sub>-C<sub>30</sub>)alkyl or hydroxy-naphthyl(C<sub>1</sub>-C<sub>30</sub>)alkyl; and

R<sup>3</sup> is OH, NH<sub>2</sub>, (C<sub>1</sub>-C<sub>30</sub>)alkoxy or NH-Y-CH<sub>2</sub>-Z, where Y is a (C<sub>1</sub>-C<sub>30</sub>) hydrocarbon moiety and Z is CO<sub>2</sub>H or CONH<sub>2</sub>; n for each occurrence is independently an integer from 1 to 5; and

R<sup>4</sup> for each occurrence is independently (C<sub>1</sub>-C<sub>30</sub>)alkyl, (C<sub>1</sub>-C<sub>30</sub>)acyl or -C((NH)(NH<sub>2</sub>));

provided that when A<sup>8</sup> is not a lipophilic D-amino acid or is not deleted then at least one of A<sup>6</sup>, A<sup>7</sup>, A<sup>9</sup>, A<sup>10</sup>, A<sup>11</sup> and A<sup>12</sup> is a D-

amino acid or at least one of A<sup>6</sup>, A<sup>7</sup>, A<sup>9</sup>, A<sup>10</sup>, A<sup>11</sup>, A<sup>12</sup>, A<sup>13</sup>, A<sup>14</sup>, A<sup>15</sup>, A<sup>16</sup>, A<sup>17</sup>, A<sup>18</sup>, A<sup>19</sup>, A<sup>20</sup>, A<sup>21</sup> and A<sup>22</sup> is deleted.

15 (previously presented): A compound according to claim 14 wherein said compound is

[Ile<sup>5</sup>, D-Leu<sup>8</sup>]hPTHrP(1-34)NH<sub>2</sub>,

[Ile<sup>5</sup>, D-Leu<sup>8</sup>, Trp<sup>23</sup>]hPTHrP(1-34)NH<sub>2</sub>,

[Ile<sup>5</sup>, des-Leu<sup>8</sup>, Trp<sup>23</sup>]hPTHrP(1-34)NH<sub>2</sub> (SEQ ID NO:47),

[Ile<sup>5</sup>, des-Leu<sup>8</sup>]hPTHrP(1-34)NH<sub>2</sub> (SEQ ID NO:48),

[des-Leu<sup>8</sup>, Trp<sup>23</sup>]hPTHrP(1-34)NH<sub>2</sub> (SEQ ID NO:49),

[Ile<sup>5</sup>, des-Leu<sup>18</sup>]hPTHrP(1-34)NH<sub>2</sub> (SEQ ID NO:50),

[Ile<sup>5</sup>, des-Leu<sup>18</sup>, Trp<sup>23</sup>]hPTHrP(1-34)NH<sub>2</sub> (SEQ ID NO:51),

[des-Leu<sup>18</sup>, Trp<sup>23</sup>]hPTHrP(1-34)NH<sub>2</sub> (SEQ ID NO:52),

[Ile<sup>5</sup>, D-Leu<sup>8</sup>, Glu<sup>22,25</sup>, Leu<sup>23,28,31</sup>, Lys<sup>26,30</sup>, Aib<sup>29</sup>]hPTHrP(1-34)NH<sub>2</sub>,

[Ile<sup>5</sup>, D-Leu<sup>8</sup>, Glu<sup>22,25</sup>, Trp<sup>23</sup>, Lys<sup>26,30</sup>, Leu<sup>28,31</sup>, Aib<sup>29</sup>]hPTHrP(1-34)NH<sub>2</sub>,

[Ile<sup>5</sup>, D-Leu<sup>8</sup>, Glu<sup>22,25,29</sup>, Leu<sup>23,28,31</sup>, Lys<sup>26,30</sup>]hPTHrP(1-34)NH<sub>2</sub>,

[Ile<sup>5</sup>, D-Leu<sup>8</sup>, Glu<sup>22,25,29</sup>, Trp<sup>23</sup>, Lys<sup>26,30</sup>, Leu<sup>28,31</sup>]hPTHrP(1-34)NH<sub>2</sub> or

[D-Leu<sup>8</sup>, Trp<sup>23</sup>]hPTHrP(7-34)NH<sub>2</sub>.

16 (withdrawn): A method of selectively binding the PTH2 receptor which comprises administering to a patient in need thereof an analogue according to claim 9 or a pharmaceutically acceptable salt thereof.

17 (withdrawn): A method of selectively binding the PTH2 receptor which comprises administering to a patient in need thereof a compound according to claim 10 or a pharmaceutically acceptable salt thereof.

18 (withdrawn): A method of selectively binding the PTH2 receptor which comprises administering to a patient in need thereof a compound according to claim 11 or a pharmaceutically acceptable salt thereof.

19 (withdrawn): A method of selectively binding a PTH2 receptor which comprises administering to a patient in need



thereof a compound according to claim 12 or a pharmaceutically acceptable salt thereof.

20 (withdrawn): A method of selectively binding a PTH2 receptor which comprises administering to a patient in need thereof an analogue according to claim 13 or a pharmaceutically acceptable salt thereof.

21 (withdrawn): A method of selectively binding a PTH2 receptor which comprises administering to a patient in need thereof a compound according to claim 14 or a pharmaceutically acceptable salt thereof.

22 (withdrawn): A method of selectively binding a PTH2 receptor which comprises administering to a patient in need thereof a compound according to claim 15 or a pharmaceutically acceptable salt thereof.

23 (original): A pharmaceutical composition comprising an analogue according to claim 9 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

24 (original): A pharmaceutical composition comprising a compound according to claim 10 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

25 (original): A pharmaceutical composition comprising a compound according to claim 11 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

26 (original): A pharmaceutical composition comprising a compound according to claim 12 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

27 (original): A pharmaceutical composition comprising an analogue according to claim 13 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

28 (original): A pharmaceutical composition comprising a compound according to claim 14 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

29 (original): A pharmaceutical composition comprising a compound according to claim 15 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

30 (withdrawn): A method of treating a medical disorder that results from altered or excessive action of the PTH2 receptor, which comprises administering to a patient in need thereof an effective amount of an analogue according to claim 7, sufficient to inhibit the activation of the PTH2 receptor of said patient.

31 (withdrawn): A method of treating a medical disorder that results from altered or excessive action of the PTH2 receptor, which comprises administering to a patient in need thereof an effective amount of an analogue according to claim 9, sufficient to inhibit the activation of the PTH2 receptor of said patient.

32 (withdrawn): A method of treating a medical disorder that results from altered or excessive action of the PTH2 receptor, which comprises administering to a patient in need thereof an effective amount of a compound according to claim 10, sufficient to inhibit the activation of the PTH2 receptor of said patient.

33 (withdrawn): A method of treating a medical disorder that results from altered or excessive action of the PTH2 receptor, which comprises administering to a patient in need thereof an effective amount of a compound according to claim 11, sufficient to inhibit the activation of the PTH2 receptor of said patient.

34 (withdrawn): A method of treating a medical disorder that results from altered or excessive action of the PTH2 receptor, which comprises administering to a patient in need thereof an effective amount of a compound according to claim 12, sufficient to inhibit the activation of the PTH2 receptor of said patient.

35 (withdrawn): A method of treating a medical disorder that results from altered or excessive action of the PTH2 receptor, which comprises administering to a patient in need thereof an effective amount of an analogue according to claim 13, sufficient to inhibit the activation of the PTH2 receptor of said patient.

36 (withdrawn): A method of treating a medical disorder that results from altered or excessive action of the PTH2 receptor, which comprises administering to a patient in need thereof an effective amount of a compound according to claim 14, sufficient to inhibit the activation of the PTH2 receptor of said patient.

37 (withdrawn): A method of treating a medical disorder that results from altered or excessive action of the PTH2 receptor, which comprises administering to a patient in need thereof an effective amount of a compound according to claim 15, sufficient to inhibit the activation of the PTH2 receptor of said patient.

38 (withdrawn): A method according to claim 30 wherein said medical disorder is abnormal CNS functions, abnormal pancreatic functions, divergence from normal mineral metabolism and homeostasis, male infertility, abnormal blood pressure or a hypothalamic disease.

39 (withdrawn): A method according to claim 31 wherein said medical disorder is abnormal CNS functions, abnormal pancreatic functions, divergence from normal mineral metabolism and homeostasis, male infertility, abnormal blood pressure or a hypothalamic disease.

40 (withdrawn): A method according to claim 32 wherein said medical disorder is abnormal CNS functions, abnormal pancreatic functions, divergence from normal mineral metabolism and homeostasis, male infertility, abnormal blood pressure or a hypothalamic disease.

41 (withdrawn): A method according to claim 33 wherein said medical disorder is abnormal CNS functions, abnormal pancreatic functions, divergence from normal mineral metabolism and homeostasis, male infertility, abnormal blood pressure or a hypothalamic disease.

42 (withdrawn): A method according to claim 34 wherein said medical disorder is abnormal CNS functions, abnormal pancreatic functions, divergence from normal mineral metabolism and homeostasis, male infertility, abnormal blood pressure or a hypothalamic disease.

43 (withdrawn): A method according to claim 35 wherein said medical disorder is abnormal CNS functions, abnormal pancreatic functions, divergence from normal mineral metabolism and homeostasis, male infertility, abnormal blood pressure or a hypothalamic disease.

44 (withdrawn): A method according to claim 36 wherein said medical disorder is abnormal CNS functions, abnormal pancreatic functions, divergence from normal mineral metabolism and homeostasis, male infertility, abnormal blood pressure or a hypothalamic disease.

45 (withdrawn): A method according to claim 37 wherein said medical disorder is abnormal CNS functions, abnormal pancreatic functions, divergence from normal mineral metabolism and homeostasis, male infertility, abnormal blood pressure or a hypothalamic disease.

46 (withdrawn): A method of treating a medical disorder that results from altered or excessive action of the PTH2 receptor, which comprises administering to a patient in need thereof an effective amount of a PTH analogue or a truncated PTH analogue or a pharmaceutically acceptable salt thereof according to claim 1, sufficient to inhibit the activation of the PTH2 receptor of said patient.

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47 (withdrawn): A method according to claim 46 wherein said medical disorder is abnormal CNS functions, abnormal pancreatic functions, divergence from normal mineral metabolism and homeostasis, male infertility, abnormal blood pressure or a hypothalamic disease.